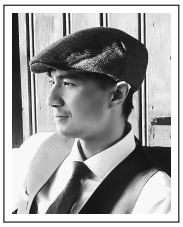
NGUYEN Quang-Duy



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Education

2017 – 2020 **PhD in Computer Science**
École Doctorale des Sciences Pour l'Ingénieur, University Clermont-Auvergne, France
UR TSCF, MathNUM departement, INRAE (Irstea), Clermont-Ferrand, France
PhD defense : 16/07/2020

2014 – 2015 **Master 2 in Networks and Communicating Systems**
University Claude Bernard Lyon I, France
Note : 15.31/20.00 - Rank : ***1/60***

2013 – 2014 **Master 1 in Computer Science**
Institute Francophone for Information Technology (IFI), Hanoi, Vietnam
Note : 14.20/20.00

2007 – 2012 **Engineer of Information Technology in Computer Engineering**
Hanoi University of Science and Technology, Vietnam
Note : 14.96/20.00

Experience

12/2021 – present **Postdoctoral Researcher**
LSEA laboratory, CEA List, Palaiseau, France
Project : Tools and methods for system complex engineering in Industrie 4.0
Keywords : Industrie 4.0, LocalSEA testbed, OPC UA, TurtleBot3, Niryo, ROS

10/2020 – 09/2021 **Postdoctoral Researcher**
LTCI laboratory, Télécom-Paris, Palaiseau, France
Project : OPC-UA PubSub for Caméléon
Keywords : IIoT, SNCF, OPC UA, PubSub, Embedded System, Zephyr OS, C

01/2017 – 07/2020 **PhD Student**
UR TSCF, MathNUM departement, INRAE
Project : ConnecSens, AgroTechnoPôle
Keywords : Agriculture, IoT, Ontology, Reasoning, OWL, SWRL, Python

08/2016 – 10/2016 **Research Engineer**
Programmation, Networks and Systems team, LaBRI laboratory, Bordeaux, France
Project : Le Palais de la Mémoire
Keywords : Sounds, Method of Loci, Distributed Algorithms, Beacons, BLE, Android

04/2015 – 07/2016 **Master 2 Intern / Research Engineer**
Networks team, ICube laboratory, Strasbourg, France
Project : FIT/IoT-lab
Keywords : Multihoming, Mobility, Contiki, TelosB, Python, C/C++

01/2014 – 07/2014 **Master 1 Intern**
Institute Francophone for Information Technology
Project : Modeling and diffusion of mobile users profile
Keywords : Participative Detection, Modeling, Android, GAMA Platform, GAML

Publications*

First-authored items : 8/11
Citations : 34
H-index : 4
I-index : 1
Items related to **IoT/IIoT** : 6
Items related to **Ontology** : 5
Items related to **OPC UA** : 3
Items related to **Robotics** : 1

[CI.6] **Quang-Duy Nguyen**, Patrick Bellot, and Pierre-Yves Petton, *"An OPC UA PubSub Implementation Approach for Memory-Constrained Sensor Devices"*, Proceedings of the 31st IEEE International Symposium on Industrial Electronics (ISIE), 06/2022

[CI.5] **Quang-Duy Nguyen**, Fadwa Tmar, Yining Huang, and Saadia Dhouib, *"Early Lessons Learned from the Development of a Local OPC UA-based Robotic Testbed for Research"*, Proceedings of the 31st IEEE International Symposium on Industrial Electronics (ISIE), 06/2022

[CI.4] **Quang-Duy Nguyen**, Saadia Dhouib, Jean-Pierre Chanet, and Patrick Bellot, *"Towards a Web-of-Things Approach for OPC UA Field Device Discovery in the Industrial IoT"*, Proceedings of the 18th IEEE International Conference on Factory Communication Systems (WFCS), 04/2022

[CI.3] **Quang-Duy Nguyen**, Catherine Roussey, Patrick Bellot, and Jean-Pierre Chanet, *"Stack of Services for Context-Aware Systems : An Internet-Of-Things System Design Approach"*, Proceedings of the 15th IEEE International Conference on Computing and Communication Technologies (RIVF), 08/2021

[JI.2] Julian Eduardo Plazas, Sandro Bimonte, Christophe de Vaulx, Michel Schneider, **Quang-Duy Nguyen**, Jean-Pierre Chanet, Hongling Shi, Kun Mean Hou, and Juan Carlos Corrales, *"A Conceptual Data Model and its Automatic Implementation for IoT-Based BI Applications : UML Profile and MDA Approach"*, IEEE Internet of Things Journal, 10/2020

[T.1] **Quang-Duy Nguyen**, *"Interoperability and Upgradability Improvement for Context-Aware Systems in Agriculture 4.0"*, PhD thesis, University Clermont-Auvergne, 07/2020

[CF.2] **Quang-Duy Nguyen**, Catherine Roussey, Maria Poveda-Villalón, Christophe de Vaulx, Jean-Pierre Chanet, and Camille Noûs, *"CASO et IRRIG deux ontologies pour le développement de systèmes contextuels : cas d'usage sur l'automatisation de l'irrigation"*, Proceedings of le 31es journées francophones d'Ingénierie des Connaissances (IC), 07/2020

[JI.1] **Quang-Duy Nguyen**, Catherine Roussey, Maria Poveda-Villalón, Christophe de Vaulx, and Jean-Pierre Chanet, *"Development Experience of a Context-Aware System for Smart Irrigation using CASO and IRRIG ontologies"*, Special Issue "Semantic Technologies Applied to Agriculture", MDPI Applied Science Journal, 2020.

[CI.2] Maria Poveda-Villalón, **Quang-Duy Nguyen**, Catherine Roussey, Christophe de Vaulx, and Jean-Pierre Chanet, *"Ontological Requirement Specification for Smart Irrigation Systems : A SOSA/SSN and SAREF Comparison"*, Proceedings of the 9th International Semantic Sensor Networks Workshop, 17th International Semantic Web Conference (ISWC), 10/2018

[CF.1] Maria Poveda-Villalón, **Quang-Duy Nguyen**, Catherine Roussey, Christophe de Vaulx, and Jean-Pierre Chanet, *"Besoins ontologiques d'un système d'irrigation intelligent : Comparaison entre SSN et SAREF"*, Proceedings of le 29es journées francophones d'Ingénierie des Connaissances (IC), 07/2020

[CI.1] **Quang-Duy Nguyen**, Julien Montavont, Nicolas Montavont, and Thomas Noël, *"RPL Border Router Redundancy in the Internet of Things"*, Proceedings of the 15th International Conference on Ad-Hoc Networks and Wireless (Adhoc-Now), 07/2016.

Research Skills

Project Management
System Implementation
Scientific Writing
Presentation

Linguistic

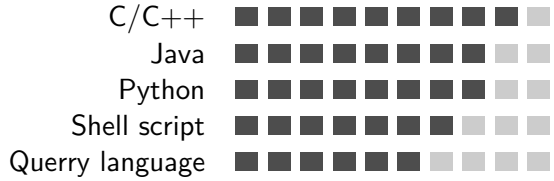
French
English
Vietnamese

*T : Thesis ; JI : International Journal ; CI : International Conference ; CF : Francophone Conference

Technical Skills

Development Process	Mini-Waterfall, LOT, Agile
Operating System	Linux, Zephyr, Contiki, Android
Network Protocol	TCP/IP, OPC UA PubSub, MQTT
Vocabulary	SOSA/SSN, CASO, IRRIG, AAS
Tool	Protégé, GIT, Latex, Wireshark

Programming



References

- **Dr. Saadia DHOUIB**, Senior researcher in LSEA laboratory, DILS department,CEA List
Supervisor of the project "Tools and methods for system complex engineering in Industrie 4.0"
✉ saadia.dhouib@cea.fr

- **Prof. Patrick BELLOT**, Director of CCN team, LCTI laboratory, INFRES department, Télécom-Paris
Project manager of the project "OPC-UA PubSub for Caméléon"
✉ patrick.bellot@telecom-paris.fr

- **Dr. Jean-Pierre CHANET**, Director of UR TSCF, MathNUM department, INRAE
Director of the thesis "Interoperability and Upgradability Improvement for Context-Aware Systems in Agriculture 4.0"
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